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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,055	11/24/2003	Krishna M. Ravi	HES 2002-IP-008094U2	3248

7590 03/22/2007  
CRAIG W. RODDY  
HALLIBURTON ENERGY SERVICES GROUP  
2600 SOUTH SECOND STREET, Mail Drop 0440  
DUNCAN, OK 73536

EXAMINER
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KUGEL, TIMOTHY J

ART UNIT	PAPER NUMBER
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1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/721,055

Applicant(s)

RAVI ET AL.

Examiner

Timothy J. Kugel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22, 24-34, 36-59, 88 and 89 is/are pending in the application.
- 4a) Of the above claim(s) 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22, 24-32, 34, 36-59, 88 and 89 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-22, 24-34, 36-59, 88 and 89 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date see attached detailed action.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-22, 24-34, 36-59, 88 and 89 are pending as amended on 31 January 2007, claims 23 and 35 being cancelled. Claim 33 is withdrawn from further consideration.
2. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office action.

### ***Response to Amendment***

3. Applicant's cancellation of claims 23 and 35 renders their previously cited rejection under 35 USC 102(e) moot.

The rejection of claims 23 and 35 under 35 USC 102(e) as being anticipated by US Patent Application Publication 2004/0171499 (Ravi hereinafter) has been withdrawn.

Please note that, while listed under the heading "Claim Objections", the citation that claims 23 and 35 separated dependent claims from the claim upon which they depended did not constitute an objection to those claims. As stated in the last Office action "applicant's sequence will not be changed."

4. The declarations of Krishna Ravi and B. Raghava Reddy under 37 CFR 1.132 filed 31 January 2007 are insufficient to overcome the rejection of claims 1-7, 11-22, 32, 34, 36-38, 40, 41 and 43-59 under 35 USC 102(e) as being anticipated by US Patent

Application Publication 2004/0171499 (Ravi hereinafter) as set forth in the last Office action because:

Each declaration asserts that the declarant is **the** inventor of the subject matter disclosed in the instant application and of the subject matter of Ravi relied upon in the rejection noted above (emphasis added).

First, the declarations are mutually exclusive as each declarant cannot be **the** inventor to the exclusion of the other. If each is **an** inventor in common with the other, the declarations should state such.

Further, if the declarants combined are **the** inventors of the subject matter disclosed in the instant application—rather than the inventors of claims 1-7, 11-22, 32, 34, 36-38, 40, 41 and 43-59—what of second inventor listed on the oath, Donald L. Whitfill? If Krishna Ravi and B. Raghava Reddy are inventors in common of only of claims 1-7, 11-22, 32, 34, 36-38, 40, 41 and 43-59, the declarations should state such. If Donald L. Whitfill is no longer an inventor of at least one claim in the application the inventorship must be amended in compliance with 37 CFR 1.48(b). Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. Applicant's statement of common ownership at the time the invention was made, filed 31 January 2007, is sufficient to disqualify Ravi as prior art under the provisions of 35 USC 103(c).

The rejection of claims 8-10, 39 and 42 under 35 USC § 103(a) as being unpatentable over US Patent 3,256,936 (Johnson hereinafter) in view of Ravi has been withdrawn.

### ***Information Disclosure Statement***

6. The information disclosure statements submitted on 17 November 2006, 31 January 2007 and 22 February 2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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8. Although not directed to the elected hydrophobic silane coated particles, in the interest of compact prosecution, claims 1-3, 5, 12-22, 24-29, 40, 41, 43-48, 50-59, 88 and 89 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 52, 53, 55-64, 66-69, 72-75, 77-81, 85, 88 and 90 of copending Application 10/350,533.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims a method of using—specifically cementing—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation through a well bore—including pumping—wherein the fluid comprises a base fluid and a portion of elastic particles, wherein the base fluid is present at from about 30% to about 120% by weight of the cement and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts, the particles are present in the range of from about 1% to about 200% by weight of the cement, can be pre-expanded up to about 8 times their original diameter, which calculates to up to 268 times their original volume by  $\frac{4}{3}\pi r^3$  before being added to composition with an internal fluid—including the elected internal fluid, air—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile—including EXPANCEL particles as exemplified by applicant.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

9. Although not directed to the elected species, in the interest of compact prosecution, claims 1-3, 5-7, 11, 13, 14, 17, 18, 24, 26-30, 41, 43, 44, 46-48, 50-52, 54-56, 58, 88 and 89 are rejected under 35 USC 102(b) as being anticipated by US Patent 3,145,773 (Jorda hereinafter).

Jorda teaches a method of completing formations traversed by an oil, water or gas producing well (Column 1 Lines 10-18) comprising injecting a slurry of oil or water and expandable elastic particles covered with an impermeable film or layer (Column 3 Lines 1-58).

Since Jorda teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Jorda composition would inherently be the same as claimed.

10. Although not directed to the elected species of hydrophobic silane coated particles, in the interest of compact prosecution, claims 1-3, 5-7, 11-22, 24-29, 40, 41, 43-48, 51-59, 88 and 89 are rejected under 35 USC 102(e) as being anticipated by US Patent Application Publication 2004/0144537 (Reddy hereinafter).

Reddy teaches a method of using—specifically cementing (§0006)—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation through a well bore (§0001)—including pumping (§0017)—wherein the fluid comprises a base fluid and a portion of elastic particles (Abstract, §0006), wherein the

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base fluid is present at from about 30% to about 120% by weight of the cement (§0017) and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts (§0008) and the particles are present in the range of from about 1% to about 200% by weight of the cement (§0007), can be pre-expanded up to about 8 times their original diameter, which calculates to up to 268 times their original volume by  $\frac{4}{3}\pi r^3$  before being added to composition with an internal fluid—including the elected internal fluid, air (§§0007 and 0008)—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile (§0006)—including EXPANCEL particles as exemplified by applicant (§0008).

Since Reddy teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Reddy composition would inherently be the same as claimed.

The applied reference has a common assignee and at least one common inventor with the instant application. Based upon the earlier effective US filing date of the reference, it constitutes prior art under 35 USC 102(e). This rejection under 35 USC 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

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11. Claims 1-7, 11-22, 32, 34, 36-38, 40, 41 and 43-59 stand and new claims 88 and 89 are rejected under 35 USC 102(e) as being anticipated by Ravi.

Ravi teaches a method of using—including in cementing and drilling (§0009)—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation (§0002) through a well bore (Abstract)—including pumping (§0003)—wherein the fluid comprises a base fluid and a portion of elastic particles (§0011), wherein the base fluid is present at from about 25% to about 150% by weight of the cement and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts—including mineral oils, synthetic oils and esters as claimed (§0017) and the particles are present in the range of from about 1% to about 200% by weight of the cement, have a specific gravity of from about 0.3 to about 0.99, a compressibility of about  $1.5 \times 10^{-3} \text{ psi}^{-1}$  to about  $1.5 \times 10^{-9} \text{ psi}^{-1}$ , are substantially impermeable to the fluids typically encountered during cementing operations (§0018), can be pre-expanded up to about 40 times their original volume before being added to composition with an internal fluid—including the elected internal fluid, air (§0019)—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile (§0020) and can withstand pressures in excess of 21,000 psi without crushing (§0023)—including EXPANCEL particles as exemplified by applicant (§§0019-0021)—coated with hydrophobic silane material (Claims 1 and 16-18).

Since Ravi teaches the same composition as claimed, the variability of the density and the temperature resistance of the particles of the Ravi composition would inherently be the same as claimed.

The applied reference has a common assignee and at least one common inventor with the instant application. Based upon the earlier effective US filing date of the reference, it constitutes prior art under 35 USC 102(e). This rejection under 35 USC 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

### ***Claim Rejections - 35 USC § 103***

12. Although not directed to the elected species, in the interest of compact prosecution, claims 8-10, 34, 36-39 and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson in view of Jorda as applied to claims 1-3, 5-7, 11, 13, 14, 17, 18, 24, 26-30, 41, 43, 44, 46-48, 50-52, 54-56, 58, 88 and 89 above.

Johnson teaches a method of drilling and cementing a wellbore comprising drilling a wellbore wherein the wellhead is positioned on the ocean floor (Column 1 Lines 8-13 and 58-61) and the assembly comprises pipe strings extending downward that are identical to pipe strings extending upward (Figure 2 and Column 2 Lines 6-9) and a riser to inject mud (Figure 3 Reference No. 53 and Column 4 Lines 15-20).

Johnson does not disclose expressly injecting a fluid of the composition claimed.

Jorda teaches a method of completing formations traversed by an oil, water or gas producing well comprising injecting a slurry of oil or water and expandable elastic particles covered with an impermeable film or layer as detailed above.

Since Jorda teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Jorda composition would inherently be the same as claimed.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the fluid composition of Jorda in the method of Johnson. The motivation to do so would have been to prevent contamination of the oil by water from an adjacent formation (Jorda Column 1 Lines 19-28).

13. Although not directed to the elected species of hydrophobic silane coated particles, in the interest of compact prosecution, claims 8-10, 34, 36-39 and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson in view of Reddy as applied to claims 1-3, 5-7, 11-22, 24-30, 40, 41, 43-48, 51-59, 88 and 89 above.

Johnson teaches a method of drilling and cementing a wellbore comprising drilling a wellbore wherein the wellhead is positioned on the ocean floor and the assembly comprises pipe strings extending downward that are identical to pipe strings extending upward and a riser to inject mud as detailed above.

Johnson does not disclose expressly injecting a fluid of the composition claimed.

Reddy teaches a method of using—specifically cementing—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation through a well bore—including pumping—wherein the fluid comprises a base fluid and a portion of elastic particles, wherein the base fluid is present at from about 30% to about 120% by weight of the cement and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts and the particles are present in the range of from about 1% to about 200% by weight of the cement, can be pre-expanded up to about 8 times their original diameter, which calculates to up to 268 times their original volume by  $\frac{4}{3}\pi r^3$  before being added to composition with an internal fluid—including the elected internal fluid, air—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile—including EXPANCEL particles as exemplified by applicant as detailed above.

Since Reddy teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Reddy composition would inherently be the same as claimed.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the fluid composition of Reddy in the method of Johnson. The motivation to do so would have been to provide compositions that can withstand the cyclical stresses that occur during the life of the well (Reddy ¶0006).

The applied reference, Reddy, has at least one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.

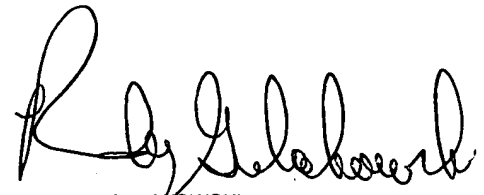
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK  
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A handwritten signature in black ink, appearing to read 'Randy Gulakowski', is positioned above the printed name and title.

RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700